

ABSTRACT:

The invention relates to an image processing method of extracting geometrical data of the spine, for extracting the left and right pedicle landmarks of each spine vertebra, comprising steps of:

acquiring image data of a 2-D frontal image of the spine; associating spine

- 5 States to vertebra positions along the spine and estimating locations of left and right pedicle landmark Candidates in each State; defining a State Cost for forming Couples of left and right pedicle landmark Candidates (P_L and P_R); estimating sets of Best Couple Candidates, in each State, from the lowest State Costs; defining a Path Cost to go from one State to the next State; selecting a pedicle landmark Couple in each spine State (V) among the Best Couple Candidates from the minimum Path Costs, and localizing the left and right pedicle landmarks of each spine vertebra from said selected pedicle landmark Couple.
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The invention also relates to a system, a medical apparatus and a program product for carrying out the method.

- 15 Application: Medical Imaging; x-ray Medical Systems and apparatus; Program Product for Medical Imaging.

Figure: FIG.7B